

**Environmental Assessment
NEPA CA-650-2006-16
CACA-46546**

INTRODUCTION.

Mr. Joseph Mathewson of Matcon Corporation, Inc. has submitted a plan of operations to excavate a quarry on 9.5 acres of public land situated about 1.5 miles west of Blue Point, about ½ mile north of Jawbone Canyon. This assessment is for the description of this proposed action and its impacts to the environment.

PURPOSE AND NEED.

The purpose of this action is to excavate and commercially develop a deposit of zeolite located on a pair of mining claims located by Mr. Joseph Mathewson and Dr. Ralph Pray per the Mining Law of 1872. In order to do this the operator needs to have a plan of operations approved by the Bureau of Land Management. The BLM is required to document NEPA compliance prior to any such approval. The purpose of this document is to assess the impacts to the environment by this proposed action, and to determine whether an environmental impact statement is needed or appropriate.

AUTHORITY AND PLANNING CONFORMANCE.

This proposed action is in conformance with the Mining Law of 1872 and the Federal Land Policy Management Act of 1976. The area and type of action involved is described by the California Desert Conservation Area Plan of 1980, as amended. This plan states that mining plans of operation for these public lands may be processed and approved subject to compliance with the Surface Management regulations found in Title 43, Subpart 3809 of the Code of Federal Regulations.

RELATIONSHIP TO STATUTES, REGULATIONS AND AGENCY JURISDICTION.

The federal statutes governing this proposed action and its approval include, but are not limited to the Mining Law of 1872, the Endangered Species Act, the National Historic Preservation Act, the National Environmental Policy Act and the Federal Land Policy Management Act of 1976. The pertinent federal regulations governing this action are the Surface Management regulations of 43 CFR 3809. The proposed action takes place on federal public lands managed by the Bureau of Land Management. The chief federal agency having jurisdiction in this matter is the Bureau of Land Management.

PROPOSED ACTION AND ALTERNATIVE.

Proposed Action

Matcon Corporation means to develop a quarry or shallow open-pit mine for the production of zeolites, a locatable mineral under the Mining Law formed by the weathering and alteration of fine-grained volcanic ash or tuff. The affected area is approximately 9.5 acres of public land situated in the northwest quarter of Section 22, Township 30 South, Range 36 East, Mount Diablo Meridian (about lat. 35.314° N, long. 118.109° W). To find the site, follow the county road in Jawbone Canyon to an intersection one mile west of Blue Point, then proceed 0.6 miles northwest into Hoffman Canyon. The area involved is immediately east of the access road. See [Map 1](#) for the operator's proposed 9.5 acres of disturbance.

The operator states that:

- ½ acre per year will be disturbed over a period of twenty years, totaling 9.5 acres in all. The type of operation will be an open-pit quarry or mine.
- The operation may be worked year around, working on weekdays.
- Production will be intermittent, up to a maximum of 25,000 tons per year.
- Hauling with end-dump or transfer trucks will be up to (maximum) 32 loads per day, depending on sales requirements.
- At various times equipment on site will include: one or more dozers; a loader; haul trucks; a motor grader (as needed for access road maintenance);
- Other equipment will include: a self contained portable crushing/screening plant composed of a jaw crusher, cone crusher, three-deck screen and stacking conveyors. The unit will be permitted by AQMD and will be on site only when material processing is occurring. The plant is not planned to be on site for more than 3 weeks at a time during any crushing/screening event.
- Other facilities during periods of usage will include: a self-contained office trailer; port-a-pottie; a tool or equipment storage van; a portable truck scale.
- Some drilling/blasting will be accomplished using a licensed driller/blaster. No explosives will be stored on site.
- Workers on site during periods of usage will include 2 -3 of the operator's staff, and up to 4-5 subcontractors during periods of drilling/blasting, crushing/screening and loading/transporting.
- Water will be purchased and brought in to the site by water truck, to be used primarily for dust control for access roads, quarry floor and when crushing/screening. Usage is estimated as being up to 10,000 gallons/day or 150,000 gallons per month. All water will be onsite for operations. No process water or surplus water will be generated.

Reclamation and other measures proposed by the operator include:

- Soil, sand and finely-weathered rock will be stockpiled separately onsite for reclamation, re-application and revegetation of the site. The spreading of growth media (soil) will be an ongoing process. Portions of the mine will be recontoured and covered with growth media as it is depleted and abandoned.
- Any spilled diesel or crankcase oil will be removed and disposed of according to regulations at an authorized waste disposal (TSDf) facility.

- Slopes will be stabilized and drainage courses maintained. Benches will be blasted or modified so as to conform to federal and state standards
- The site will be recontoured so as to blend with the surrounding terrain by pushing and ripping with a bulldozer.
- Compacted areas will be scarified by ripping
- Once operations are completed in an area, stockpiled soil and fine, weathered rock will be spread on benches and quarry floor as growth media (2" thick is proposed).
- Proposed revegetation includes 5 lbs/acre Desert Rice Grass, 5 lbs/acre Brittlebush and 3 lbs/acre Lacy-Leafed Phacelia, to be applied after scarification of the ground surface and with application of straw mulch for erosion control.
- All equipment and trash will be removed from the site.
- Reclamation of all disturbed areas will be completed to the standards described in 43 CFR 3809, and reasonable measures taken to prevent unnecessary or undue degradation of Federal lands during operations.
- The operator estimates a reclamation cost and financial assurance of \$15,176.

The intent is to use heavy mechanized equipment to strip and stockpile the shallow layer of soil and overburden immediately over the deposit, excavate the zeolite, and transport it by truck over existing local and county access roads through Jawbone Canyon.

One should note that Matcon, Inc. must also obtain State and Local permits per the California Surface Mining and Reclamation Act before commencing any operations on the ground. The Bureau of Land Management has a joint Memorandum of Understanding with Kern County and the State of California reconciling the reclamation bond requirements of the Federal, State and County governments. The standard procedure calls for an operator to supply a performance bond that jointly satisfies the Bureau of Land Management, the State of California and the County of Kern.

No Action Alternative.

The no action alternative means not to approve the plan of operation submitted by Matcon Corporation, not allowing mining at this location.

AFFECTED ENVIRONMENT.

A description of the general and regional environment can be found in the Environmental Impact Statements completed for the California Desert Conservation Area Management Plan of 1980, as amended; and the West Mojave Management Plan. Those descriptions of the existing environment are incorporated here by reference. The environmental descriptions and issues pertinent to this specific proposed action are as follows.

General Setting, Climate and Vegetation.



Photo 1. A representative view of the area near and south of the report area. Taken from <http://www.heinphoto.com/landscape/images/LADE-10455.jpg>

The area affected by this proposed action is on the floor and eastern edge of Hoffman Canyon, a tributary canyon trending to the north and west of Jawbone Canyon. The area is about 30 miles north and east of the town of Mojave, California, in the westernmost part of the Mojave Desert. The area involved is characterized by long, dry and hot summers with short, cool and relatively moist winters. Soils are thin and lacking in much organic material, with vegetation dominated by creosote, burrobush and occasional joshua trees. The area involved was visited and investigated by a BLM wildlife biologist, finding no indication for the presence of any species listed as threatened or endangered per the Endangered Species Act.

Cultural Resources.

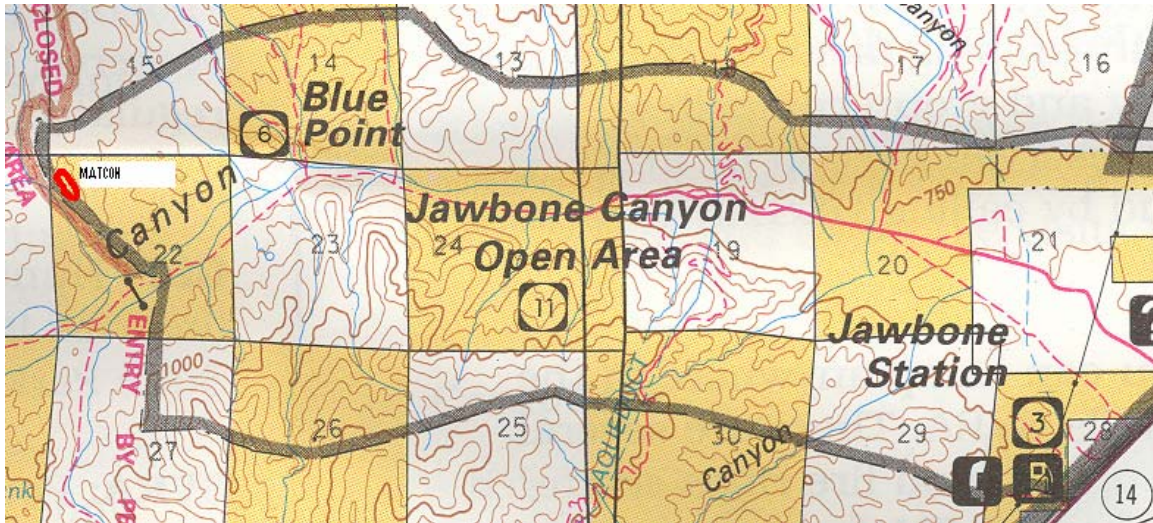
One cultural resource site, CA-Ker-6400, is located on the mining claim. This site had been recorded prior to the pedestrian survey of the Area of Potential Effect. No other sites were identified during the survey. This site will be avoided during mining operations. The operator has marked the boundary of the mining area to avoid site CA-Ker-6400 and will require vehicles to stay on the existing route. A cultural resource protection sign will be placed along the access road to the mine, as a further reminder to avoid disturbance to cultural resources.

Threatened or Endangered Species

The area involved is outside any designated tortoise habitat, and a field inspection by Ms. Shelley Ellis, Wildlife Biologist, did not reveal any sign or indication of desert tortoise in the vicinity of the site. No species listed as threatened or endangered under the Endangered Species Act are known to occur at this site.

Recreation

The proposed mining is within those public lands classified as 'Intensive Use' by the California Desert Conservation Area of 1980. The County Road in Hoffman Canyon forms the west boundary of the Intensive Use lands of the Jawbone Canyon Open Area (see Map 2, below). Thus the proposed operation is within the Jawbone Canyon Open Area and the Jawbone-Butterbrecht Area of Critical Environmental Concern (ACEC). The



Map 2. The proposed operation in the Jawbone Canyon Open Area.

Management plan for this ACEC contains no prohibitions against mining or surface disturbance, and other mineral-related operations are permitted elsewhere in this ACEC.

Critical Resources.

The following critical elements are required for consideration in all environmental assessments and environmental impact statements, with results as follows.

<i>Element</i>	<i>Affected</i>
Air Quality	No
Areas of Critical Environmental Concern	No
Cultural Resources	No
Prime/Unique Farmlands	No
Floodplains	No
Native American Religious Concerns	No
Threatened or Endangered Species	No
Hazardous/Solid Wastes	No
Groundwater & Drinking Water Quality	No
Wetlands & Riparian Zones	No
Wild & Scenic Rivers	No
Wilderness	No

ENVIRONMENTAL IMPACT ANALYSIS

Analysis of the Proposed Action

Cultural Resources. The proposed action will have no direct impact on any known cultural resources, as the only known cultural site near the area lies outside any proposed earth-disturbing operations. Some indirect or cumulative impact may result from the general increase of human activity in the nearby area, in that some workers or visitors to the proposed operation may discover this cultural site by accident. This possible indirect impact may be mitigated by clearly marking or fencing the boundaries of the proposed mining operation, imposing the cultural resource protection measures of 43 CFR 3809.420(b)(8), and positioning a cultural resource protection sign at the proposed operation.

Soil and Vegetation. The excavation, stockpiling, earth disturbance and land usage associated with proposed action will have a direct and immediate impact on local soils and vegetation. Approximately ½ acre per year of disturbance is estimated by this proposal. Without reclamation, such a proposal would lead to a long-term or cumulative increase in the amount of disturbed ground in Hoffman Canyon. This would be a negative impact leading to local invasions of opportunistic plant species (weeds) and local increases of soil erosion. With reclamation, such earth disturbance will only be a temporary impact to the local soils and vegetation.

Impacts to soils and vegetation can be mitigated by requiring concurrent reclamation as per the submitted plan of operations and by requiring a performance bond sufficient to guarantee reclamation of the site. This can be accomplished by imposing the requirements of 43 CFR 3809.420 regarding prompt reclamation, and by 43 CFR 3809.570 regarding State-approved financial guarantees. The California Surface Mining and Reclamation Act (SMARA) requires operators to perform reclamation and provide financial guarantees under State law. A Memorandum of Understanding exists between the State, the BLM and the local county government regarding such financial guarantees, and that MOU accords with the BLM's bonding requirements per 43 CFR 3809.570. The claimant thus may not begin surface-disturbing operations without a reclamation bond that mutually satisfies three agencies: the Bureau of Land Management, the California Department of Conservation, and the Kern County Planning Department.

Threatened or Endangered Species. No such species are known to occur at or adjacent to the site of this proposed action. No direct, indirect or cumulative impacts to threatened or endangered species are anticipated by this action.

Recreation. The proposed action will have an immediate and direct impact on off-highway vehicle recreation by removing 9.5 acres of public lands from that activity for the duration of the operation (20 years). That is, mining and off-road motorcycling are mutually exclusive uses of the public lands. The proposed action will also have an indirect and cumulative impact by increasing the amount of truck traffic on the Kern County road providing access through Jawbone Canyon to U.S. Highway 14. Given the

operator's stated maximum production of 25,000 tons per year, and arbitrarily presuming that each haul truck carries 20 tons, this equates roughly to 100 truckloads a month (more or less).

These impacts can be mitigated by requiring the operator to sign and fence the area(s) of operation so as to exclude recreational conflicts, and by placing reasonable limits to the time(s) when haul trucks may share the Jawbone Canyon Open Area with recreational visitors. Recreational usage of the Jawbone Canyon Open Area increases sharply during weekends, holidays and (to a lesser extent) business days immediately before and after such periods. It would be reasonable for the operator to avoid sending trucks through Jawbone Canyon from Friday afternoon through Monday morning in any given week. It would also be reasonable to avoid hauling through Jawbone Canyon on any recognized State/Federal holiday, and a day immediately before and after such holidays.

Analysis of the No Action Alternative

The no action alternative will mean no changes to the existing site and associated natural resources. However, the no action alternative will effectively mean the denial of the claimants' ability to develop a mineral deposit they believe is potentially valuable.

This alternative receives no further consideration because it conflicts with Title 43, Section 1701 of the United State Code, which states that "the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands including implementation of the Mining and Minerals Policy Act of 1970 (84 Stat. 1876, 30 U.S.C. 21a) as it pertains to the public lands -." Title 30, Section 21a of the United States Code further states that "The Congress declares that it is the continuing policy of the Federal Government in the national interest to foster and encourage private enterprise in (1) the development of economically sound and stable domestic mining, minerals, metal and mineral reclamation industries - -."

CUMULATIVE IMPACT ANALYSIS

The proposed action will result in the surface disturbance, removal of vegetation and disruption of wildlife habitat over 9.5 acres of public land immediately adjacent to the Kelso Road (SC251), a graded road trending north and west from Jawbone Canyon. However, the rate of that disturbance will take place gradually over a period up to 20 years in length, with concurrent reclamation occurring simultaneously. Vegetation and wildlife habitat are renewable resources that, once reclamation takes place in compliance with State and BLM standards, will eventually be re-established. Zeolite mineralization is a nonrenewable resource. The development of this mine will result in a permanent and irreversible decrease in zeolite deposits on the public lands, but would be in conformance with the BLM's mandate under the Federal Land Policy Management Act to manage the public lands in a manner that recognizes our nation's need for domestic mineral sources.

PREPARATION AND CONSULTATION

This environmental assessment was prepared by Randall Porter, Geologist, with consultation from

Shelley Ellis	Wildlife Biologist
Joan Oxendine	Archeologist
Glenn Harris	Soil, Water, Air Specialist
Craig Beck	Chief of Recreation & Wilderness

FINDING OF NO SIGNIFICANT IMPACT / DECISION RECORD.

It is my decision to authorize a plan of operations submitted by Matcon Corporation Inc., serialized as CACA-46456, describing a zeolite-mining operation in Hoffman Canyon. I have determined that the proposed action with the recommended mitigation measures will not have any significant impacts on the human environment and that an environmental impact statement is not required. I have determined that the proposed project is in conformance with the approved land use plan. It is my decision to implement the project with the mitigation measures identified below.

Ridgecrest Field Manager

Date

RATIONALE

It is my decision to approve this action because:

- The proposed action complies with the California Desert Conservation Area Plan of 1980, which is the pertinent management plan for this area. This Plan states that mining plans of operation may be approved in compliance with 43 CFR 3809.
- The proposed action is not in conflict with the Jawbone –Butterbrecht Area of Critical Environmental Concern Management Plan. This ACEC management plan contains no prohibition against mining or other surface disturbance.

- The mitigating measures identified below are deemed sufficient to avoid unnecessary or undue degradation of the public lands, and are in compliance with Title 43, Subpart 3809 of the Code of Federal Regulations.

MITIGATING MEASURES FOR CACA-46546

The following mitigating measures for this action are adapted from Title 43, Subpart 3809.420 of the Code of Federal Regulations.

(a) General performance standards—

(1) Technology and practices. You must use equipment, devices, and practices that will meet the performance standards of this subpart.

(2) Sequence of operations. You must avoid unnecessary impacts and facilitate reclamation by following a reasonable and customary mineral exploration, development, mining and reclamation sequence.

(3) Land-use plans. Consistent with the mining laws, your operations and post-mining land use must comply with the applicable BLM land-use plans and activity plans, and with coastal zone management plans under 16 U.S.C. 1451, as appropriate.

(4) Mitigation. You must take mitigation measures specified by BLM to protect public lands. *Such measures include:*

a) fencing or clearly posting the boundaries of the affected area with steel fenceposts.

b) complying with all measures required by California state law, including the Surface Mining and Reclamation Act and measures of the Kern County Air Pollution Control District.

c) complying with all measures required by the County of Kern.

d) supplying a performance bond mutually satisfactory to the County of Kern, the State of California and the Bureau of Land Management (43 CFR 3809.570).

e) posting a cultural resource protection sign when and as provided by the authorized officer.

f) avoiding the use of Jawbone Canyon during the weekend periods from Friday noon through Monday noon, recognized State/Federal holidays, and a day before and after recognized State/Federal holidays.

(5) Concurrent reclamation. You must initiate and complete reclamation at the earliest economically and technically feasible time on those portions of the disturbed area that you will not disturb further. *Such concurrent reclamation may include such measures as: 1) saving and stockpiling the top six inches of topsoil; 2) stripping no more than 1/2 acre at any one time without performing concurrent reclamation; 3) performing concurrent reclamation by landscaping, replacement of soil and revegetating disturbed area(s); 4) using native seed gathered from adjacent land, or purchased seed of equivalent types, to ensure a vegetation mix more-or-less equivalent to the neighboring landscape.*

(6) Compliance with other laws. You must conduct all operations in a manner that complies with all pertinent Federal and state laws, *including measures required by the County of Kern and the State of California.*

(b) Specific standards—

(1) Access routes. Access routes shall be planned for only the minimum width needed for operations and shall follow natural contours, where practicable to minimize cut and fill. When the construction of access routes involves slopes that require cuts on the inside edge in excess of 3 feet, the operator may be required to consult with the authorized officer concerning the most appropriate location of the access route prior to commencing operations. An operator is entitled to access to his operations consistent with provisions of the mining laws. Where a notice or a plan of operations is required, it shall specify the location of access routes for operations and other conditions necessary to prevent unnecessary or undue degradation. The authorized officer may require the operator to use existing roads to minimize the number of access routes, and, if practicable, to construct access roads within a designated transportation or utility corridor. When commercial hauling is involved and the use of an existing road is required, the authorized officer may require the operator to make appropriate arrangements for use and maintenance.

(2) Mining wastes. All tailings, dumps, deleterious materials or substances, and other waste produced by the operations shall be disposed of so as to prevent unnecessary or undue degradation and in accordance with applicable Federal and state Laws.

(3) Reclamation. (i) At the earliest feasible time, the operator shall reclaim the area disturbed, except to the extent necessary to preserve evidence of mineralization, by taking reasonable measures to prevent or control on-site and off-site damage of the Federal lands.

(ii) Reclamation shall include, but shall not be limited to:

(A) Saving of topsoil for final application after reshaping of disturbed areas have been completed;

(B) Measures to control erosion, landslides, and water runoff;

(C) Measures to isolate, remove, or control toxic materials;

(D) Reshaping the area disturbed, application of the topsoil, and revegetation of disturbed areas, where reasonably practicable; and

(E) Rehabilitation of fisheries and wildlife habitat.

(iii) When reclamation of the disturbed area has been completed, except to the extent necessary to preserve evidence of mineralization, the authorized officer shall be notified so that an inspection of the area can be made.

(4) Air quality. All operators shall comply with applicable Federal and state air quality standards, including the Clean Air Act (42 U.S.C. 1857 et seq.).

(5) Water quality. All operators shall comply with applicable Federal and state water quality standards, including the Federal Water Pollution Control Act, as amended (30 U.S.C. 1151 et seq.).

(6) Solid wastes. All operators shall comply with applicable Federal and state standards for the disposal and treatment of solid wastes, including regulations issued pursuant to the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.). All garbage, refuse or waste shall either be removed from the affected lands or disposed of or treated to minimize, so far as is practicable, its impact on the lands.

(7) Fisheries, wildlife and plant habitat. The operator shall take such action as may be needed to prevent adverse impacts to threatened or endangered species, and their habitat which may be affected by operations.

(8) Cultural and paleontological resources. (i) Operators shall not knowingly disturb, alter, injure, or destroy any scientifically important paleontological remains or any historical or archaeological site, structure, building or object on Federal lands.

(ii) Operators shall immediately bring to the attention of the authorized officer any cultural and/or paleontological resources that might be altered or destroyed on Federal lands by his/her operations, and shall leave such discovery intact until told to proceed by the authorized officer. The authorized officer shall evaluate the discoveries brought to his/her attention, take action to protect or remove the resource, and allow operations to proceed within 10 working days after notification to the authorized officer of such discovery.

(iii) The Federal Government shall have the responsibility and bear the cost of investigations and salvage of cultural and paleontology values discovered after a plan of operations has been approved, or where a plan is not involved.

(9) Protection of survey monuments. To the extent practicable, all operators shall protect all survey monuments, witness corners, reference monuments, bearing trees and line trees against unnecessary or undue destruction, obliteration or damage. If, in the course of operations, any monuments, corners, or accessories are destroyed, obliterated, or damaged by such operations, the operator shall immediately report the matter to the authorized officer. The authorized officer shall prescribe, in writing, the requirements for the restoration or reestablishment of monuments, corners, bearing and line trees.

(10) Fire. The operator shall comply with all applicable Federal and state fire laws and regulations, and shall take all reasonable measures to prevent and suppress fires in the area of operations.

(11) Acid-forming, toxic, or other deleterious materials. You must incorporate identification, handling, and placement of potentially acid-forming, toxic or other deleterious materials into your operations, facility design, reclamation, and environmental monitoring programs to minimize the formation and impacts of acidic, alkaline, metal-bearing, or other deleterious leachate, including the following:

(i) You must handle, place, or treat potentially acid-forming, toxic, or other deleterious materials in a manner that minimizes the likelihood of acid formation and toxic and other deleterious leachate generation (source control);

(ii) If you cannot prevent the formation of acid, toxic, or other deleterious drainage, you must minimize uncontrolled migration of eachate; and

(iii) You must capture and treat acid drainage, or other undesirable effluent, to the applicable standard if source controls and migration controls do not prove effective. You are responsible for any costs associated with water treatment or facility maintenance after project closure. Long-term, or post-mining, effluent capture and treatment are not acceptable substitutes for source and migration control, and you may rely on them only after all reasonable source and migration control methods have been employed.

(12) Leaching operations and impoundments. (i) You must design, construct, and operate all leach pads, tailings impoundments, ponds, and solution-holding facilities according to standard engineering practices to achieve and maintain stability and facilitate reclamation.

(ii) You must construct a low-permeability liner or containment system that will minimize the release of leaching solutions to the environment. You must monitor to detect potential releases of contaminants from heaps, process ponds, tailings impoundments, and other structures and remediate environmental impacts if leakage occurs.

(iii) You must design, construct, and operate cyanide or other leaching facilities and impoundments to contain precipitation from the local 100-year, 24-hour storm event in addition to the maximum process solution inventory. Your design must also include allowances for snowmelt events and draindown from heaps during power outages in the design.

(iv) You must construct a secondary containment system around vats, tanks, or recovery circuits adequate to prevent the release of toxic solutions to the environment in the event of primary containment failure.

(v) You must exclude access by the public, wildlife, or livestock to solution containment and transfer structures that contain lethal levels of cyanide or other solutions.

(vi) During closure and at final reclamation, you must detoxify leaching solutions and heaps and manage tailings or other process waste to minimize impacts to the environment from contact with toxic materials or leachate. Acceptable practices to detoxify solutions and materials include natural degradation, rinsing, chemical treatment, or equally successful alternative methods. Upon completion of reclamation, all materials and discharges must meet applicable standards.

(vii) In cases of temporary or seasonal closure, you must provide adequate maintenance, monitoring, security, and financial guarantee, and BLM may require you to detoxify process solutions.

(13) Maintenance and public safety. During all operations, the operator shall maintain his or her structures, equipment, and other facilities in a safe and orderly manner. Hazardous sites or conditions resulting from operations shall be marked by signs, fenced, or otherwise identified to alert the public in accordance with applicable Federal and state laws and regulations.